

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A method of modifying a subscription of a subscriber to a one
2 or more telecommunications service services based on subscriber information and
3 service information that are stored in a directory repository, the method comprising
4 the computer-implemented steps of:
5 determining whether the subscriber is currently logged in, and if the subscriber is not
6 currently logged in, directing the subscriber to log in through an
7 authentication server and generating a privilege token associated with the
8 authenticated subscriber by an authorization service;
9 receiving a modification request to modify the subscription of the subscriber to the
10 one or more telecommunications service services;
11 determining, based on privilege information in a privilege token associated with the
12 subscriber that is generated by an the authorization service, whether the
13 subscriber has privileges sufficient to carry out the requested modification;
14 receiving, from the directory repository, first subscriber information and first service
15 information representing only such services for which the subscriber is then
16 currently subscribed;
17 modifying the first subscriber information and first service information to reflect the
18 modification;
19 sending the modified information to the directory repository, resulting in creating and
20 storing, in the directory repository, second service information that reflects the
21 modification;

22 generating an engagement request to engage the telecommunications service for the
23 subscriber in order to fulfill the modification request.

1 2. (Currently Amended) A method as recited in Claim 1, wherein the authorization
2 service generates further comprising the steps of creating and storing the privilege token by
3 the steps of:

4 receiving a user name associated with the subscriber and mapping the user name to a
5 distinguished name in the directory repository;
6 creating and storing in the privilege token, one or more roles occupied by the
7 subscriber based on role information that is stored in the directory repository.
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1 3. (Currently Amended) A method as recited in Claim 1, further comprising wherein the
2 step of determining whether the subscriber is currently logged in comprises determining
3 whether the steps of creating and storing a host object that uniquely identifies the subscriber
4 for the subscriber exists and wherein the host object contains the privilege token
5 corresponding to the subscriber is stored with the host object that uniquely identifies the
6 subscriber.

1 4. (Currently Amended) A method as recited in Claim 1, wherein the step of generating
2 an engagement request further comprising comprises the steps of subscribing the subscriber
3 to the service by creating and storing a relation of a subscriber object that programmatically
4 represents the subscriber to a service object that programmatically represents the service, and
5 creating and storing one or more attribute values in the relation, wherein the attribute values
6 define the subscription.

1 5. (Currently Amended) A method of modifying subscriptions of a group of subscribers
2 to one or more telecommunications services based on subscriber information and service
3 information that are stored in a directory repository, the method comprising the computer-
4 implemented steps of:

5 receiving from an administrator of the group, a request to modify the subscriptions of
6 the subscribers to the one or more telecommunications service services;
7 determining, based on privilege information in a privilege token that is associated
8 with the administrator and is generated by an authorization service, whether
9 the administrator has privileges sufficient to carry out the requested
10 modification;
11 receiving, from the directory repository, current subscriber information and current
12 service information representing then-current services to which the
13 subscribers are subscribed;
14 modifying the subscriber information and service information to reflect the
15 modifications, resulting in creating and storing, in the directory repository,
16 updated service information that reflects the modifications;
17 generating one or more requests to subscribe the telecommunications service to the
18 group of subscribers to fulfill the request of the administrator.

1 6. (Original) A method as recited in Claim 5, wherein the group of subscribers is
2 defined explicitly by creating and storing a named group that contains one or more
3 subscribers as group members.

1 7. (Original) A method as recited in Claim 5, wherein the group of subscribers is
2 defined implicitly such that the group comprises one or more subscribers in an object tree of
3 the directory repository who are subordinate in the tree to a container node of the tree.

1 8. (Original) A method as recited in Claim 5, further comprising the steps of subscribing
2 one of the subscribers in the group to the service by creating and storing a relation of a
3 subscriber object that programmatically represents the subscriber to a service object that
4 programmatically represents the service, and creating and storing one or more attribute
5 values in the relation, wherein the attribute values define the subscription.

1 9. (Currently Amended) A method of automatically logging in a subscriber to a all
2 telecommunications service services subscribed to by the subscriber based on subscriber
3 information and service information that are stored in a directory repository, the method
4 comprising the computer-implemented steps of:

5 receiving a request to from the subscriber to log in to the telecommunications service
6 services;

7 authenticating the subscriber by an authentication server;

8 generating a privilege token associated with the subscriber by an authorization

9 service;

10 performing authentication to determine determining whether the subscriber is allowed

11 to automatically log into the telecommunication service services, said

12 determination based on privilege information in the privilege token associated
13 with the subscriber;

14 if the subscriber is allowed to automatically log into the telecommunications services,

15 receiving, from the directory repository, a list of all services for which the

16 subscriber is then currently subscribed, ~~including the telecommunications~~
17 ~~service; and~~ automatically logging the subscriber into all services identified in
18 the list.

1 10. (Original) A method as recited in Claim 9, wherein automatically logging the
2 subscriber into all services identified in the list comprises the steps of:
3 for each of the services identified in the list:
4 obtaining service information that describes the services from the directory
5 repository;
6 creating and storing a relation between a service object in the directory repository that
7 uniquely identifies and represents each of the services and privileges of the
8 subscriber, and a subscriber object that uniquely represents the subscriber.

1 11. (Original) A method as recited in Claim 10, further comprising the steps of storing
2 the privilege token in a service selection gateway for use in subsequent authorization
3 processes relating to the subscriber.

1 12. (Cancelled)

1 13. (Currently Amended) A method of automatically subscribing a subscriber to a
2 telecommunications service based on subscriber information and service information that are
3 stored in a directory repository, the method comprising the computer-implemented steps of:
4 receiving a request from the subscriber to obtain a list of available
5 telecommunications services;

6 generating a list of only those telecommunications services for which the subscriber
7 has a privilege to subscribe to, based on privilege information and service
8 information that is stored in the directory repository and associated with the
9 subscriber, said privilege information associated with the subscriber
10 specifying what telecommunications services the subscriber has privileges to
11 subscribe to;
12 receiving a subscriber selection of one of the telecommunications services from the
13 generated list of telecommunications services;
14 verifying that the subscriber has privileges that permit the subscriber to subscribe to
15 the selected telecommunications service;
16 creating and storing updated subscription information in the directory repository;
17 generating a request to subscribe the subscriber to the selected telecommunications
18 service based on the updated subscription information.

1 14. (Currently Amended) A method as recited in Claim 13, wherein said privilege
2 information associated with the subscriber is comprised further comprising the steps
3 of retrieving a privilege token for the subscriber that identifies a role of the subscriber
4 that maps to one or more privileges of the subscriber, in response to receiving a
5 request to from the subscriber to obtain a list of available telecommunications
6 services, wherein the privileges of the subscriber specify what telecommunications
7 services to which the subscriber is entitled to subscribe to a telecommunications
8 service is determined by the role in the privilege token for the subscriber.

1 15. (Original) A method as recited in Claim 13, wherein generating a list of only those
2 telecommunications services for which the subscriber has a privilege to subscribe to includes

3 the step of generating and providing to the subscriber a custom display page that identifies
4 only those telecommunications services for which the subscriber has a privilege to subscribe.

1 16. (Currently Amended) A computer-readable medium carrying one or more sequences
2 of instructions for modifying a subscription of a subscriber to ~~a~~one or more
3 telecommunications ~~service~~ services based on subscriber information and service information
4 that are stored in a directory repository, which instructions, when executed by one or more
5 processors, cause the one or more processors to carry out the steps of:

6 determining whether the subscriber is currently logged in, and if the subscriber is not
7 currently logged in, directing the subscriber to log in through an
8 authentication server and generating a privilege token associated with the
9 authenticated subscriber by an authorization service;

10 receiving a modification request to modify the subscription of the subscriber to the
11 one or more telecommunications ~~service~~ services;

12 determining, based on privilege information in a privilege token associated with the
13 subscriber ~~that is generated by~~ an the authorization service, whether the
14 subscriber has privileges sufficient to carry out the requested modification;

15 receiving, from the directory repository, first subscriber information and first service
16 information representing only such services for which the subscriber is then
17 currently subscribed;

18 modifying the first subscriber information and first service information to reflect the
19 modification;

20 sending the modified information to the directory repository, resulting in creating and
21 storing, in the directory repository, second service information that reflects the
22 modification;

23 generating an engagement request to engage the telecommunications service for the
24 subscriber in order to fulfill the modification request.

1 17. (Currently Amended) An apparatus for modifying a subscription of a subscriber to a
2 one or more telecommunications service services based on subscriber information and
3 service information that are stored in a directory repository, comprising:
4 means for determining whether the subscriber is currently logged in, and if the
5 subscriber is not currently logged in, means for directing the subscriber to log
6 in through an authentication server and generating a privilege token associated
7 with the authenticated subscriber by an authorization service;
8 means for receiving a modification request to modify the subscription of the
9 subscriber to the one or more telecommunications service services;
10 means for determining, based on privilege information in a privilege token associated
11 with the subscriber ~~that is generated by an~~ the authorization service, whether
12 the subscriber has privileges sufficient to carry out the requested modification;
13 means for receiving, from the directory repository, first subscriber information and
14 first service information representing only such services for which the
15 subscriber is then currently subscribed;
16 means for modifying the first subscriber information and first service information to
17 reflect the modification;
18 means for sending the modified information to the directory repository, resulting in
19 creating and storing, in the directory repository, second service information
20 that reflects the modification;
21 means for generating an engagement request to engage the telecommunications
22 service for the subscriber in order to fulfill the modification request.

1 18. (Currently Amended) An apparatus for modifying a subscription of a subscriber to a
2 one or more telecommunications service services based on subscriber information and
3 service information that are stored in a directory repository, comprising:
4 a network interface that is coupled to a data network that includes the directory
5 repository for receiving information therefrom;
6 a processor;
7 one or more stored sequences of instructions which, when executed by the processor,
8 cause the processor to carry out the steps of:
9 determining whether the subscriber is currently logged in, and if the
10 subscriber is not currently logged in, directing the subscriber to log in
11 through an authentication server and generating a privilege token
12 associated with the authenticated subscriber by an authorization
13 service;
14 receiving a modification request to modify the subscription of the subscriber
15 to the one or more telecommunications service services;
16 determining, based on privilege information in a privilege token associated
17 with the subscriber that is generated by ~~an~~ the authorization service,
18 whether the subscriber has privileges sufficient to carry out the
19 requested modification;
20 receiving, from the directory repository, first subscriber information and first
21 service information representing only such services for which the
22 subscriber is then currently subscribed;
23 modifying the first subscriber information and first service information to
24 reflect the modification;

25 sending the modified information to the directory repository, resulting in
26 creating and storing, in the directory repository, second service
27 information that reflects the modification;
28 generating an engagement request to engage the telecommunications service
29 for the subscriber in order to fulfill the modification request.

1 19. (Original) A method of modifying a subscription of a subscriber to a
2 telecommunications service based on information stored in a directory repository, the method
3 comprising the computer-implemented steps of:
4 receiving a request to identify one or more services to which a subscriber is
5 subscribed, based on a prior request to modify the subscription of the
6 subscriber to the telecommunications service;
7 generating a list of the one or more services to which the subscriber is currently
8 subscribed, based on group membership of the subscriber, one or more roles
9 occupied by the subscriber, and authorization information associated with the
10 subscriber that is stored in the directory repository;
11 generating individual service information for each of the one or more services in the
12 list, based on subscriber information and service information that is stored in
13 the directory repository, for use in automatically subscribing the subscriber to
14 a service that is represented by the individual service information.

1 20. (Original) A computer-readable medium carrying one or more sequences of
2 instructions for modifying a subscription of a subscriber to a telecommunications service
3 based on subscriber information and service information that are stored in a directory

4 repository, which instructions, when executed by one or more processors, cause the one or
5 more processors to carry out the steps of:

6 receiving a request to identify one or more services to which a subscriber is
7 subscribed, based on a prior request to modify the subscription of the
8 subscriber to the telecommunications service;
9 generating a list of the one or more services to which the subscriber is currently
10 subscribed, based on group membership of the subscriber, one or more roles
11 occupied by the subscriber, and authorization information associated with the
12 subscriber that is stored in the directory repository;
13 generating individual service information for each of the one or more services in the
14 list, based on subscriber information and service information that is stored in
15 the directory repository, for use in automatically subscribing the subscriber to
16 a service that is represented by the individual service information.

1 21. (Original) An apparatus for modifying a subscription of a subscriber to a
2 telecommunications service based on subscriber information and service information that are
3 stored in a directory repository, comprising:

4 means for receiving a request to identify one or more services to which a subscriber is
5 subscribed, based on a prior request to modify the subscription of the
6 subscriber to the telecommunications service;
7 means for generating a list of the one or more services to which the subscriber is
8 currently subscribed, based on group membership of the subscriber, one or
9 more roles occupied by the subscriber, and authorization information
10 associated with the subscriber that is stored in the directory repository;

11 means for generating individual service information for each of the one or more
12 services in the list, based on subscriber information and service information
13 that is stored in the directory repository, for use in automatically subscribing
14 the subscriber to a service that is represented by the individual service
15 information.

1 22. (Original) An apparatus for modifying a subscription of a subscriber to a
2 telecommunications service based on subscriber information and service information that are
3 stored in a directory repository, comprising:
4 a directory-enabled service selection framework that is coupled to the directory
5 repository for receiving stored information therefrom;
6 a processor;
7 one or more stored sequences of instructions in the framework which, when executed
8 by the processor, cause the processor to carry out the steps of:
9 receiving a request to identify one or more services to which a subscriber is
10 subscribed, based on a prior request to modify the subscription of the
11 subscriber to the telecommunications service;
12 generating a list of the one or more services to which the subscriber is
13 currently subscribed, based on group membership of the subscriber,
14 one or more roles occupied by the subscriber, and authorization
15 information associated with the subscriber that is stored in the
16 directory repository;
17 generating individual service information for each of the one or more services
18 in the list, based on subscriber information and service information
19 that is stored in the directory repository, for use in automatically

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20 subscribing the subscriber to a service that is represented by the
21 individual service information.